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REMOVAL SITE EVALUATION NLO TRAILER INSTALLATION PROJECT JULY 13, 1990

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RSE

REMOVAL SITE EVALUATION

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Feed Materials Production Center

U.S. Department of Energy

July 13, 1990

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INTRODUCTION

Two trailers have been ordered for temporary office space to be used by NLO, Inc. personnel. The purpose of the trailers is to provide NLO with suitable office space, on-site, in which to review and copy documentation necessary for the defense of the law suit filed by former employees and unions of NLO, Inc. These trailers must be provided with a fire protection system (sprinklers) which necessitates the excavation of approximately three cubic yards of soil in order to tap onto the fire main.

This Removal Site Evaluation (RSE) has been completed by the DOE under authorities delegated by Executive Order 12580 under Section 104 of CERCLA and is consistent with Section 300.410 of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). This RSE addresses the excavation of soil prior to the installation of the fire protection system in the NLO trailers and has been completed to support the decision as to whether the present conditions warrant a removal action.

SOURCE TERM

The area where the trailers will be placed is located East of the In-Vivo Building 53B and Health & Safety Building 53A. This is within the Uncontrolled area (non-process area) of the plant site. No uranium or thorium was ever processed in this area. There have not been any spills in the area according to the FMPC AEDO Spill Data Base. Field investigations, including surface and subsurface soil sampling, confirmed that some of the soil to be excavated in this project has above background levels of total Uranium. Soil samples were taken at four locations in the area where the trailers are to be located. Activity concentration of total uranium in discrete samples collected from the area ranged from 14 to 61 pCi/g. The samples were taken November 13, 1989, and the analytical results and locations of sampling are included as Attachments 1 and 2.

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

The potential threat posed by the above background levels of uranium in the soil to be excavated is the potential suspension of the soil particles in the atmosphere and the potential migration of the contaminants through wind and water erosion. This threat will be present through the duration of the piping installation for the fire system.

The magnitude of the potential threat of migration of uranium contaminated soils is minimal, however. The analytical results of two of the soil samples were Category I materials and two were Category II materials in accordance with the activity concentration levels in FMPC-720. However, in order to significantly reduce this potential threat, measures will be taken during the course of excavation to control the soil and prevent release as follows:

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1. De-watering of the open excavation will be performed through the use of a sump pump as required. The water will be pumped to the nearby storm sewer drain.

2. Temporary dikes will be installed as necessary to minimize the amount of surface runoff entering the excavation area. This will be done to minimize the possibility of waterborne uranium entering the excavation and contaminating the subsurface soils and groundwater. This is also necessary to minimize the amount of water requiring characterization and disposal.

3. Excavated soil will be placed on and covered with plastic sheeting or tarps or stored in a container to prevent any erosion or other suspension of uranium contaminated soils. Plastic covers, tarps, or containers will also help to retain soil moisture, which will preclude dusting or any other airborne migration. In the event that soils have dried to the point where dusting is possible, manual re-wetting of the soils will be performed. Final soil disposition shall be in accordance with Site Policy and Procedure FMPC-720, "Control of Construction Waste." All soil sampling results will be incorporated into the RI/FS data base.

4. All excavated soil will be used as backfill, so there is no waste material involved with the project. No soil with greater than Category II activity concentration is expected based on the test data.

5. Good housekeeping rules will be maintained at the excavation site.

Use of these soil control measures listed above will greatly reduce the potential threat of a release, and eliminate the need for a removal action.

ASSESSMENT OF THE NEED FOR REMOVAL ACTION

Consistent with Section 40 CFR 300.410 of the NCP, the Department of Energy shall determine the appropriateness of a removal action. Eight factors to be considered in this determination are listed in 40 CFR 300.415 (b)(2). The following apply specifically to the soil in question.

40 CFR 300.415 (b)(2)(iv)

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.

40 CFR 300.415 (b)(2)(v)

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

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These factors are considered appropriate as a result of the concentration of uranium in the soil to be excavated during the installation of the fire protection system for the NLO trailers. Construction activities or significant storm events have a potential to cause these concentrations to migrate or be carried to areas which are uncontaminated. However, the control measures to be implemented eliminate the need for a removal action.

APPROPRIATENESS OF A RESPONSE

If it is determined that a response is appropriate due to the activity levels of the soil to be excavated and the potential for contaminants to migrate, a removal action may be required to address the existing situation.

If a planning period of less than six months exists prior to initiation of a response action, DOE will issue an Action Memorandum. The Action Memorandum will describe the selected response and supporting documentation for the decision.

If it is determined that there is a planning period greater than six months before a response is initiated, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of public health and the environment and to evaluate viable alternative response actions. It will also serve as a decision document to be included in the Administration Record.

Attachment No. 1

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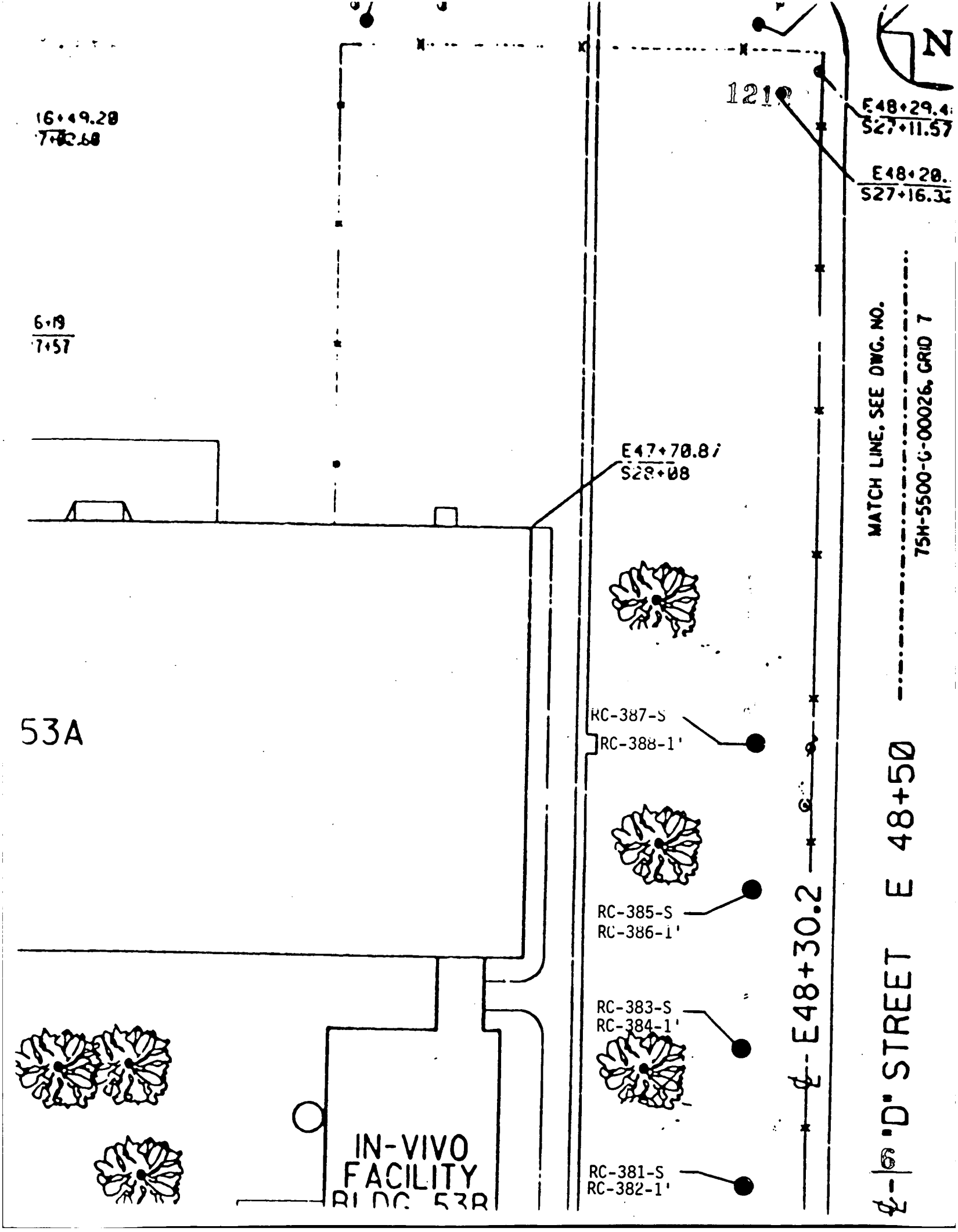
RADIOLOGICAL ANALYSIS

SAMPLE NO.	U pCi/g	Th pCi/g	U ppm	Th ppm	Th-228 pCi/g	WT. % (U) U-234	U-235	U-236	U-238
RC-0379	22	<2.8	33	<23	0.77	0.006	0.68	0.007	99.31
RC-0380			71	<23					
RC-0381	30	<2.8	45	<23	0.79	0.005	0.69	0.007	99.30
RC-0382			47	<23					
RC-0383	17	<2.8	26	<23	0.63	0.006	0.67	0.007	99.32
RC-0384			47	<23					
RC-0385	46	<3.0	70	<23	1.1	0.004	0.68	0.007	99.31
RC-0386			57	<23					
RC-0387	61	<3.0	92	<23	1.2	0.004	0.69	0.005	99.30
RC-0388			55	<23					
RC-0389	14	<2.6	24	<23	0.33	0.003	0.46	0.010	99.53

RCRA ANALYSIS

SAMPLE NO.	EP TOX (mg/l) Ag	As	Ba	Cd	Hg	Se	Pb	Cr	TOTAL Pb (ug/g)
RC-0379	<1.0	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	28.5
RC-0381	<0.1	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	16.6
RC-0383	<1.0	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	9.4
RC-0385	<1.0	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	49.3
RC-0387	<1.0	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	29.3
RC-0389	<1.0	<1.0	<25	<0.2	<0.1	<0.1	<1.0	<1.0	16.7


16+49.28
1212
E48+29.4
S27+11.57
E48+20.
S27+16.3
6+19
7+57
MATCH LINE, SEE DWG. NO.
75H-5500-G-00026, GRID 7
E47+70.8
S28+08
53A
RC-387-S
RC-388-1'
RC-385-S
RC-386-1'
RC-383-S
RC-384-1'
RC-381-S
RC-382-1'
IN-VIVO
FACILITY
BLDG 53B
℄- E48+30.2
℄- "D" STREET E 48+50
℄- 6